

EX PARTE OR LATE FILED

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February 4, 1994



Mr. William F. Caton  
Acting Secretary  
Federal Communications Commission  
1919 M Street, N.W. Room 222  
Washington, D.C. 20554

CTIA

Cellular  
Telecommunications  
Industry Association  
1133 21st Street, NW  
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Washington, DC 20036  
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RECEIVED

FEB - 4 1994

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

Re: Ex Parte Filing  
Personal Communications Services  
GEN Docket No. 90-314

Building The  
Wireless Future

Dear Mr. Caton:

On Friday, February 4, 1994, the Cellular Telecommunications Industry Association ("CTIA") sent the attached letters, transmitting PCS White Paper No. 3, Second Series, *PCS Rules Too Restrictive On Cellular, Study Finds: Antitrust Measurements Show Restrictions Not Necessary to Promote Competition*, to the FCC Commissioners and staff listed below.

Daniel Abeyta  
Rudy Baca  
Beverly Baker  
Andrew Barrett  
Thomas Beers  
Lauren Belvin  
James Bennett  
Karen Brinkmann  
Kelly Cameron  
John Cimko  
Rodney Small  
Diane Cornell  
Brian Fontes  
Bruce Franca  
David Furth  
Bart Gorman  
Sheldon Guttman  
Ralph Haller  
Jeffrey Hoagg  
Reed Hundt  
Michael Katz  
Stevenson Kaminer  
Kimberly King  
Evan Kwerel  
Blair Levin  
Kathy Levitz  
Renee Licht

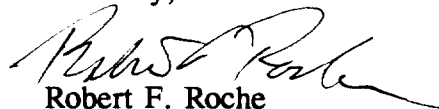
Byron Marchant  
Steve Markendorff  
Roland Martin  
Geraldine Matise  
Maura McGowan  
Ruth Milkman  
Tom Mooring  
Kent Nakamura  
Myron Peck  
Dr. Robert Pepper  
James Quello  
David Reed  
Jill Ross-Meltzer  
Sarah Siedman  
David Siddall  
Richard Smith  
David Solomon  
Thomas Spavins  
Merrill Spiegel  
Dr. Tom Stanley  
Gerald Vaughan  
Greg Vogt  
John Williams  
John Winston

Mr. Caton  
February 4, 1994  
Page 2

The views expressed in this document reflect CTIA's position as previously filed in this proceeding.

If there are any questions in this regard, please contact the undersigned.

Sincerely,

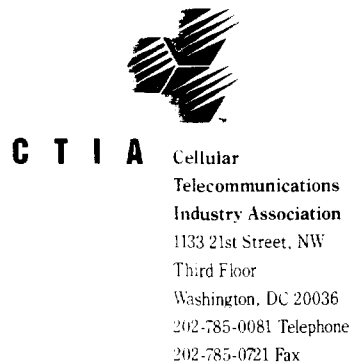
A handwritten signature in black ink, appearing to read "Robert F. Roche", with a stylized, cursive script.

Robert F. Roche

Enclosure

February 4, 1994

Commissioner Andrew C. Barrett  
Federal Communications Commission  
1919 M Street, N.W. Room 826  
Washington, D.C. 20554



Re: Ex Parte  
Docket No. 90-314 (Personal Communications Services)

Dear Andy:

The attached White Paper, *PCS Rules Too Restrictive on Cellular, Study Finds: Antitrust Measurements Show Restrictions Not Necessary to Promote Competition*, uses the Department of Justice's and Federal Trade Commission's Horizontal Merger Guidelines to show that the FCC's rules hamper, and not serve, the economic growth potential of new wireless services. The recent study by Charles River Associates (CRA) concluded that the FCC's broadband personal communications service (PCS) rules place restrictions on cellular service providers that are unnecessary.

CRA found that even in worst case scenarios, permitting cellular providers to participate like other firms in the new market would likely have little effect on the wireless telecommunications industry's competitiveness.

According to the CRA study, the FCC's rules bear reconsideration for three basic reasons.

- ◆ Restrictions on the participation of cellular providers are based on overly-conservative and arbitrary assumptions about market concentration and competitiveness which are inconsistent with the federal government's own standards of market concentration.
- ◆ Market definition from the perspective of technology is too narrow -- as technologies converge, it is no longer appropriate to think of openly competing services as distinct products in distinct markets.
- ◆ Basic Trading Areas (BTAs) are not relevant market distinctions, well-established antitrust standards prove them to be arbitrary.

The FCC may change its rules restricting cellular providers' ability to obtain PCS spectrum without fear of an anticompetitive result in the wireless marketplace. In fact, CTIA's proposal that the Commission award four 20 MHz and four 10 MHz licenses *will produce a lower concentration than could be anticipated under the FCC's rules*.

Very Truly Yours,



Thomas E. Wheeler

**Building The  
Wireless Future**

Thomas E. Wheeler  
President/CEO

February 4, 1994

Dr. Thomas Stanley, Chief Engineer  
Federal Communications Commission  
2025 M Street, N.W. Room 7002  
Washington, D.C. 20554



Re: Ex Parte  
Docket No. 90-314 (Personal Communications Services)

Dear Tom:

**Building The  
Wireless Future**

Thomas E. Wheeler  
President/CEO

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Very Truly Yours,

Thomas E. Wheeler

February 4, 1994

Dr. Robert Pepper  
Chief, Office of Plans & Policy  
Federal Communications Commission  
1919 M Street, N.W. Room 822  
Washington, D.C. 20554

**C T I A**

Cellular  
Telecommunications  
Industry Association  
1333 21st Street, NW  
Third Floor  
Washington, DC 20036  
202-785-0081 Telephone  
202-785-0721 Fax

Re: Ex Parte  
Docket No. 90-314 (Personal Communications Services)

Dear Bob:

The attached White Paper, *PCS Rules Too Restrictive on Cellular, Study Finds: Antitrust Measurements Show Restrictions Not Necessary to Promote Competition*, " uses the Department of Justice's and Federal Trade Commission's Horizontal Merger Guidelines to show that the FCC's rules hamper, and not serve, the economic growth potential of new wireless services. The recent study by Charles River Associates (CRA) concluded that the FCC's broadband personal communications service (PCS) rules place restrictions on cellular service providers that are unnecessary.

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Very Truly Yours,

  
Thomas E. Wheeler

**Building The  
Wireless Future**

Thomas E. Wheeler  
President/CEO

February 4, 1994

Commissioner James H. Quello  
Federal Communications Commission  
1919 M Street, N.W. Room 802  
Washington, D.C. 20554



Re: Ex Parte  
Docket No. 90-314 (Personal Communications Services)

Dear Jim:

**Building The  
Wireless Future .**

Thomas E. Wheeler  
President/CEO

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Very Truly Yours,

  
Thomas E. Wheeler

February 4, 1994

Chairman Reed Hundt  
Federal Communications Commission  
1919 M Street, N.W. Room 814  
Washington, D.C. 20554



Re: Ex Parte  
Docket No. 90-314 (Personal Communications Services)

Dear Mr. Chairman:

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Very Truly Yours,

  
Thomas E. Wheeler

**Building The  
Wireless Future .**

Thomas E. Wheeler  
President/CEO

February 4, 1994

Karen Brinkmann  
Federal Communications Commission  
1919 M Street, N.W. Room 814  
Washington, D.C. 20554



**C T I A** Cellular  
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Industry Association  
1133 21st Street, NW  
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Washington, DC 20036  
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202-785-0721 Fax

Re: Ex Parte  
Docket No. 90-314 (Personal Communications Services)

Dear Karen:

The attached White Paper, *PCS Rules Too Restrictive on Cellular, Study Finds: Antitrust Measurements Show Restrictions Not Necessary to Promote Competition*, uses the Department of Justice's and Federal Trade Commission's Horizontal Merger Guidelines to show that the FCC's rules hamper, and not serve, the economic growth potential of new wireless services. The recent study by Charles River Associates (CRA) concluded that the FCC's broadband personal communications service (PCS) rules place restrictions on cellular service providers that are unnecessary.

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Thomas E. Wheeler

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Wireless Future**

Thomas E. Wheeler  
President/CEO



**C T I A** Cellular  
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Washington, DC 20036  
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202-785-0721 Fax

***PCS WHITE PAPER No. 3***  
***Second Series***

**Building The  
Wireless Future ..**

***PCS Rules Too Restrictive on Cellular, Study Finds:***

***Antitrust Measurements Show  
Restrictions Not Necessary  
to Promote Competition***

***February 4, 1994***

***PCS Rules Too Restrictive On Cellular, Study Finds:  
Antitrust Measurements Show Restrictions Not Necessary to Promote Competition***

*Using the Department of Justice's and Federal Trade Commission's Horizontal Merger Guidelines, Charles River Associates (CRA) has concluded that the FCC's broadband personal communication services (PCS) rules place restrictions on cellular service providers that are unnecessary -- and possibly anti-competitive.*

**CRA found that: "Even in the most highly concentrated market structure possible under pending PCS rules, the Merger Guidelines would not bar, and might not even warrant investigation of, significant acquisitions of capacity by incumbent cellular operators."<sup>1</sup>**

The goals underpinning the FCC's rules -- ensuring that the market for new wireless services is competitive and that consumers have adequate protection -- are laudable. As it reconsiders its rules over the next several weeks, the FCC must realize that its initial PCS decision does not achieve these goals. *The FCC's rules instead threaten the economic growth potential of these new wireless services.*

According to the CRA study, the FCC's rules bear reconsideration for three basic reasons.

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<sup>1</sup>The Merger Guidelines use the Herfindahl-Hirschman Index (HHI) to measure market concentration, based on summing the squares of the individual market shares of all of the market participants. Thus, in a market with 10 firms, each with a market share of 10 percent, the HHI would be 1000. A market composed of seven firms, with two firms having shares of 25 percent each and the remaining firms having shares of 10 percent each, would have an HHI of 1750. (Each firm with 25 percent contributes 625 ( $25^2 = 625$ ), and each firm with 10 percent contributes 100, hence  $625 + 625 + 5(100) = 1750$ .) As explained below, in unconcentrated and moderately-concentrated markets HHI increases of 100 points are necessary before competitive concerns may be raised, and in highly-concentrated markets HHI increases of 50 points are necessary before competitive concerns are raised.

## Market Competitiveness: Why Cellular Restrictions Don't Make Sense

The Commission adopted its limitations on the amount of bandwidth for which cellular providers are eligible out of a legitimate interest in keeping the market for the new wireless services as competitive as possible.

But by applying the Horizontal Merger Guidelines the CRA study found that, *even in worst case scenarios, permitting cellular providers to participate like other firms in the new market would likely have little effect on the wireless telecommunications industry's competitiveness.*

The Merger Guidelines generally conclude that post-merger measures of HHI below 1000 indicate an unconcentrated market, with adverse competitive effects being unlikely. Post-merger HHIs between 1000 and 1800 indicate moderate concentration. Mergers producing HHI increases of less than 100 are unlikely to have adverse competitive effects. Neither of the foregoing examples would require further analysis under the guidelines. Mergers producing increases of more than 100 points may raise competitive concerns, depending on other conditions.

Post-merger HHIs of above 1800 indicate that a market is highly concentrated, although mergers producing an increase in the HHI of less than 50 points are unlikely to have adverse competitive effects. Mergers producing increases of more than 50 points may raise competitive concerns, depending on other conditions. Mergers producing increases in the HHI of more than 100 points are presumed to enhance market power or its exercise, although the presumption may be overcome by other factors making such exercise unlikely.<sup>2</sup>

CRA calculated the HHIs for the mobile telecommunications marketplace under scenarios in which cellular companies do not acquire additional MHz, as well as ones in which they acquire 10 MHz or 15 MHz. The scenarios also included entry by Specialized Mobile Radio (SMR) providers, and the effect of both the Commission's and CTIA's proposed licensing schemes.

*Even CRA's worst case calculations of HHIs -- in a highly-concentrated market -- produced only one instance in which an acquisition would rise by 50 points, to meet the bare minimum for consideration of an investigation.*

The basis of these calculations is the *effective capacity* of the spectrum available for mobile telecommunications service. While the 170 MHz of bandwidth available for PCS and cellular (120 MHz and 50 MHz, respectively) *could* be used to produce measures of potential market share, a simple measure of bandwidth is not a meaningful measure of the power any individual firm has in the wireless telecommunications market. Although each cellular provider does have 25 MHz of spectrum in the markets in which it operates, FCC rules require cellular

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<sup>2</sup>Compensating factors include conditions facilitating or inhibiting collusion, the potential for expansion by existing competitors, and the potential for entry by new competitors.

operators to accommodate their current analog customers. Because cellular carriers will therefore be unable to convert all their spectrum to digital, their spectrum has less *effective capacity* than spectrum that can be used exclusively to provide more spectrum-efficient digital services.<sup>3</sup> Therefore, the calculations take into account the effective capacity available under various scenarios.

### Merger Guidelines - HHI Index Example

If two celcos each had 10 MHz of PCS spectrum, and one acquired an additional 5 MHz of spectrum, the HHI index indicates that both the pre-existing and the resulting market concentration would be moderate. As the increase in the HHI resulting from the acquisition is under 100 it would not warrant concern or further analysis under the guidelines.

Firms	Pre-Acquisition				Post-Acquisition			
	Bandwidth	Capacity	Share (%)	HHI	Bandwidth	Capacity	Share (%)	HHI
Celco1	35	160	17.4	302	40	190	20.7	427
Celco2	35	160	17.4	302	35	160	17.4	302
PCS-A	30	180	19.6	383	30	180	19.6	383
PCS-B	30	180	19.6	383	30	180	19.6	383
PCS-C	20	120	13.0	170	20	120	13.0	170
PCS-D	10	60	6.5	43	10	60	6.5	43
PCS-E	10	60	6.5	43	5	30	3.3	11
Total	170	920	100	1,626	170	920	100	1,718

Assumptions: That the celcos maintain 10 MHz of bandwidth to serve analog cellular customers, and that digital enjoys a 6-to-1 capacity relationship with analog.

The following examples show that, with or without the analog handicap, the FCC's current PCS rules make little sense:

- A cellular provider that won a 10 MHz PCS license but had to retain 10 MHz of its cellular spectrum for analog services in a given market would only have a 17.4 percent share of the market's effective capacity. By contrast, a PCS competitor that won a 30 MHz MTA-wide license would automatically have a 19.6 percent market share, and would face no analog handicap or other FCC-imposed limitations. A 40 MHz licensee would have a 23.5 percent market share.

<sup>3</sup>The precise advantage of digital over analog depends in part on the technology involved, and increases in capacity may range from a multiple of 2 to 18. CRA relied upon a multiple of 6, and assumed 10 MHz of a cellular operator's bandwidth would remain devoted to analog customers. CRA Study at p.37.

- Even without an analog handicap, if a cellular company acquired 10 MHz of PCS spectrum and could use its entire 35 MHz for digital services (which most providers will be unable to do for some time), its effective capacity would only be 20.6 percent -- far below the 35 percent market share the Merger Guidelines consider the threshold for antitrust inspection. And as services such as digital SMR compete more directly with cellular and PCS, cellular providers' effective market shares would drop even further.

Even under a scenario in which five firms are present, and in which a cellular company reaches 40 MHz, its market share would be 20.7 percent -- still well below the market share of two unencumbered 40 MHz PCS companies (with 26.1 percent each) and the Merger Guidelines' 35 percent threshold for concern.<sup>4</sup>

*In fact, CTIA's proposal that the Commission award four 20 MHz and four 10 MHz licenses will produce a lower concentration than could be anticipated under the FCC's rules.*

### HHI Comparison - CTIA Proposal/FCC Model

The CTIA proposal of four 20 MHz licenses and four 10 MHz licenses will produce a less-concentrated market than the FCC's PCS regime. *The HHI index of the CTIA proposal is over 250 points less than the HHI index for the FCC model.*

Firms	CTIA Proposal				FCC PCS Model			
	Bandwidth	Capacity	Share (%)	HHI	Bandwidth	Capacity	Share (%)	HHI
Celco1	25	100	10.9	118	25	100	10.9	118
Celco2	25	100	10.9	118	25	100	10.9	118
PCS-A	20	120	13.0	170	30	180	19.6	383
PCS-B	20	120	13.0	170	30	180	19.6	383
PCS-C	20	120	13.0	170	20	120	13.0	170
PCS-D	20	120	13.0	170	10	60	6.5	43
PCS-E	10	60	6.5	43	10	60	6.5	43
PCS-F	10	60	6.5	43	10	60	6.5	43
PCS-G	10	60	6.5	43	10	60	6.5	43
PCS-H	10	60	6.5	43				
Total	170	920	100	1,087	170	920	100	1,342

Assumption: That digital enjoys a 6-to-1 capacity relationship with analog.

<sup>4</sup>The calculations assumed that each firm served all customers within the geographic market. While a non-cellular PCS licensee with 40 MHz would have 23.5 percent of the capacity within an MTA, a cellular licensee would have to serve over 40 percent of the population of the MTA before its share of the capacity to serve customers reached 23.5 percent.

## **New Competition For Cellular Is Already Emerging**

While most of the foregoing assumed a total mobile services market bandwidth of 170 MHz, developments clearly indicate that more capacity will exist. Technologies continue to converge and more services are becoming directly competitive in the mobile services marketplace.

The CRA study finds that PCS, cellular, and SMR services compete in a single mobile communications product market. For example, many SMR systems -- once non-interconnected, less sophisticated wireless systems -- are now being converted into digital networks, and are beginning to compete directly with analog cellular phone service. NEXTEL's Los Angeles ESMR system is operating, and direct competition between cellular operators and SMR providers is expected to increase as SMR companies consolidate the spectrum licenses they currently hold.

### **EMERGING COMPETITION FOR CELLULAR PROVIDERS: EXAMPLES IN THE CONSOLIDATING SMR MARKETPLACE**

NEXTEL	Has acquired radio dispatch units of Questar and Advanced MobileComm; holds ownership interest in CenCall Communications. Has acquired mobile radio licenses previously held by Motorola
CenCall	Has acquired mobile radio licenses previously held by Motorola.
Dial Page & Transit Communications	Merger pending. Dial Page has acquired mobile radio licenses previously held by Motorola.

The CRA study further found that, unless the market changes dramatically, any competitive analysis of the wireless communications market should take a very broad view of mobile communications -- a conclusion that suggests that the FCC should reconsider its separate treatment of cellular providers in its spectrum licensing rules.

The CRA study found that:

**"A combination of the shift to digital technologies, the use of compression techniques, and the use of smaller cells is breaking down barriers that had previously separated markets, so that we appear to be moving rapidly to a single market in which many firms can offer a wide array of mobile services using the spectrum currently assigned to them."**

## **Study Finds BTAs Are Not Relevant Geographic Markets**

The FCC's rules create a two-track licensing scheme with two 30 MHz licenses in each MTA and one 20 MHz license and four 10 MHz licenses in each BTA. Under the FCC's rules, cellular service providers may not obtain PCS licenses for more than 10 MHz in addition to their 25 MHz cellular holdings in areas in which they provide service to more than 10 percent of the

population. In those areas, cellular providers would be ineligible to bid on either of two 30 MHz spectrum blocks the FCC plans to license in Major Trading Areas (MTAs).

But the CRA study raises significant questions about the Commission's prohibitions, and underlying assumptions about the new wireless services marketplace.

According to the Merger Guidelines adopted by the Department of Justice and the Federal Trade Commission, a relevant market would be one in which a single monopolist firm could raise prices and remain profitable -- meaning consumers could not easily substitute other products or buy services from adjoining areas.

The FCC's restrictions on cellular providers appear to assume that a BTA is a relevant market, and that cellular providers are able to discriminate on price in and between BTAs and other service regions. *The CRA study concludes that BTAs are generally not relevant geographic markets.*

*CRA reasons that for firms operating in multiple areas -- whether BTAs, or BTAs and cellular markets -- BTAs do not constitute relevant markets for antitrust purposes as long as companies are not able to discriminate on the basis of price among different geographic areas.* For example, if a company's cellular service territory does not necessarily coincide with its BTA, a cellular provider that raised prices in the BTA would also have to raise prices for other customers in the rest of its service area, thereby losing sales and profits. If companies were unable to discriminate across such areas, many BTAs would not be relevant geographic markets. Firms operating in a single BTA will also typically find it unprofitable to raise prices in that BTA alone.

CRA also observes that *the calculation of market shares for firms in areas which are not relevant markets has no economic significance -- as they do not provide a measure of market power.* This is of particular significance to the Commission's limitations on the spectrum available to incumbent cellular companies.

## **What Should the FCC Do?**

CTIA proposes that the Commission award four 20 MHz and four 10 MHz licenses, which would mean lower concentration than could be anticipated under the FCC's current rules.

The CTIA also recommends that the FCC abandon plans to restrict cellular providers' ability to obtain licenses, based on the CRA study's significant findings that such restrictions would not only fail to address real competitiveness or market concentration concern, but would in fact restrict cellular providers to a lower market share than that awarded to winners of the biggest licenses.

In reconsidering its rulemaking, the FCC should also take factors other than market concentration into account when considering the competitiveness of the wireless telecommunications market. Because of rapid technological progress, for example, even if the market were highly concentrated, it would be difficult for companies to raise prices anti-

competitively because of the rapidly changing nature of wireless services. Similarly, as technologies converge and once-distinct technologies enter into direct competition with other services, the market will only become more competitive with new providers and new services entering all the time.